



Syllabus for academic year: .....2020/2021.....														
Training cycle: .....2019-2024.....														
<b>Description of the course</b>														
Module/Course	Histology with Embryology								Group of detailed education results					
									Group code A B	Group name Morphological Science  Scientific basis of medicine				
Faculty	Dentistry													
Major	Dentistry													
Unit realizing the subject	Histology and Embryology Division													
Specialties														
Level of studies	Uniform magister studies X* 1 <sup>st</sup> degree studies <input type="checkbox"/> 2 <sup>nd</sup> degree studies <input type="checkbox"/> 3 <sup>rd</sup> degree studies <input type="checkbox"/> postgraduate studies <input type="checkbox"/>													
Form of studies	<input type="checkbox"/> full-time    X part-time													
Year of studies	I	Semester		<input type="checkbox"/> Winter × Summer										
Type of course	X obligatory <input type="checkbox"/> limited choice <input type="checkbox"/> free choice / elective													
Course	× major <input type="checkbox"/> basic													
Language of instruction	<input type="checkbox"/> Polish    X English <input type="checkbox"/> other													
* mark <input type="checkbox"/> with an X														
<b>Number of hours</b>														
Form of education														
Unit teaching the course	Lectures (L)	Seminars (SE)	Auditorium classes (AC)	Major Classes – not clinical (MC)	Clinical Classes (CC)	Laboratory Classes (LC)	Classes in Simulated Conditions (CSC)	Practical Classes with Patient (PCP)	Specialist Classes – magister studies (SCM)	Foreign language Course (FLC)	Physical Education obligatory (PE)	Vocational Practice (VP)	Self-Study (Student's own work)	E-learning (EL)



Winter Semester													
Direct (contact) education													
Online learning (synchronous)													
Distance learning (asynchronous)													
Summer Semester													
Direct (contact) education			35										
Online learning (synchronous)	5												
Online learning (asynchronous)		10											
TOTAL per year:													
Direct (contact) education	5		35										
Online learning (synchronous)													
Online learning (asynchronous)		10											
Educational objectives (max. 6 items)													
C1. During the course of histology students should become acquaint:													
<ul style="list-style-type: none"> <li>• the principles of the basic techniques used in the morphological studies,</li> <li>• the organization of the cell model with cell organelles, their structure and functions,</li> <li>• structure and function of selected, important specialized cells,</li> <li>• classification, characteristics, origin, histological organization and role of the tissues,</li> <li>• histological organization of organs and systems and their role and the basic mechanisms that regulate their functions.</li> </ul>													
C2. During the course of embryology students should become acquaint:													
<ul style="list-style-type: none"> <li>• with prenatal part of the human development (including all stages of human pre-embryonic, embryonic and fetal development)</li> <li>• with development of pharyngeal apparatus and birth defects associated with the development of head and neck</li> </ul>													
Education result matrix for module/course in relation to verification methods of the intended education result and the type of class													
Number of course education result	Number of major education result	Student who completes the module/course knows/is able to				Methods of verification of intended education results (forming and summarising)				Form of didactic class <i>**enter the abbreviation</i>			
W 01	<b>AW1</b>	demonstrates the knowledge of human organism's structures: cells, tissues, organs and systems, especially stomatognathic system				Oral response, written examination				L, MC			



W 02	AW4	describes the organs' and the whole organism's development, especially the masticatory complex development	Oral response Written response Final test	L, MC
W 03	AW5	describes concisely the functional significance of the particular organs and systems	Participation in the discussion of problem	L, MC
U 01	A. U2	The student recognizes in images from optical or electron microscope histological structures corresponding to the organs, tissues, cells and cellular structures, shall describe and interpret their structure and the relationship between structure and function	Oral response, written examination, proper drawing preparation, practical examination	MC
K 01	K01	understands the need for learning throughout life	direct observation of student attitudes	L, MC
K02	K02	able to work in a group assuming different roles in it	direct observation of student attitudes	L, MC
K03	K03	can properly prioritize the implementation of tasks specified by him or others	direct observation of student attitudes	L, MC

\*\* L - lecture; SE - seminar; AC – auditorium classes; MC – major classes (non-clinical); CC – clinical classes; LC – laboratory classes; SCM – specialist classes (magister studies); CSC – classes in simulated conditions; FLC – foreign language course; PCP practical classes with patient; PE – physical education (obligatory); VP – vocational practice; SS – self-study, EL – E-learning .

Please mark on scale 1-5 how the above effects place your classes in the following categories:  
communication of knowledge, skills or forming attitudes:

Knowledge: ....5

Skills: ....4

Social competences: ....3.

**Student's amount of work (balance of ECTS points)**

Student's workload (class participation, activity, preparation, etc.)	Student Workload (h)
1. Contact hours:	50
2. Online learning hours (e-learning):	15
3. Student's own work (self-study):	100
Total student's workload	150
ECTS points for module/course	5
Comments	



<p><b>Content of classes</b> (please enter topic words of specific classes divided into their didactic form and remember how it is translated to intended educational effects)</p>
<p><b>Lectures :</b></p> <ol style="list-style-type: none"><li>1. Introduction to the cell. Epithelial tissue: epithelia and glands, specializations of cells surface, intercellular connections (1h).</li><li>2. Connective tissue: supporting cells family, extracellular matrix (1h)</li><li>3. Cartilage and bone, and their development (1h)</li><li>4. Muscles – skeletal, cardiac, smooth (1h)</li><li>5. Digestive tract – oral cavity, lip, tongue, tooth, tooth development (1h)</li></ol> <p>1.</p>
<p><b>Seminars - Embriology:</b></p> <ol style="list-style-type: none"><li>1. Gametogenesis: meiosis, oogenesis, spermatogenesis (2h)</li><li>2. The 1<sup>st</sup> week of development: ovulation to implantation (2h)</li><li>3. The 2<sup>nd</sup> - 3<sup>rd</sup> week: germ disc and germ layers (2h)</li><li>4. The 3<sup>rd</sup> – 8<sup>th</sup> week: organogenesis, embryonic period, fetal period (2h)</li><li>5. Head and neck development (pharyngeal apparatus) (2h)</li></ol>
<p>Practical classes</p> <p>Histology:</p> <ol style="list-style-type: none"><li>1. Histological techniques, microscopic structure and function of cells (2h).</li><li>2. Epithelial tissue: epithelia and glands, specialized surface of cells, intercellular connections (3h).</li><li>3. Connective tissue: supporting cells family, extracellular matrix, cartilage, bone, and their development (9h).</li><li>4. Muscular tissue: contractile cells, their function (2h).</li><li>5. Blood: blood cells, hemopoiesis (2h).</li><li>6. Cardiovascular system (the heart and blood vessels) (2h).</li><li>7. Immune system: immune cells, structure and function of the immune system (3h).</li><li>8. The alimentary tract: oral cavity and its contents, transport and digestive part (7h).</li></ol>
<p>Other -</p> <ol style="list-style-type: none"><li>1.</li><li>2.</li><li>3.</li></ol> <p>etc. ...</p>



<p><b>Basic literature</b> (list according to importance, no more than 3 items)</p> <ol style="list-style-type: none"> <li>1. Basic Histology. L. Carlos Junqueira, Jose Carneiro, Robert O. Kelly</li> <li>2. Human Histology. Alan Stevens, James Lowe</li> <li>3. Langman's Medical Embriology. T.W. Sadler; Lippincott Williams &amp; Wilkins</li> </ol> <p><b>Additional literature and other materials</b></p> <ol style="list-style-type: none"> <li>1. Histology and Cell Biology: An Introduction to Pathology. Abraham Kierszenbaum</li> <li>2. Histology: a text and atlas. Michael H. Ross, Gordon I. Kaye, Wojciech Pawlina</li> <li>3. Exercise notebook for medicine and dentistry student (ed. Maciej Zabel). Elsevier Urban &amp; Partner, Wrocław 2010</li> </ol>
<p><b>Didactic resources requirements</b> (e.g. laboratory, multimedia projector, other...)</p> <p>Exercise room, optical microscopes, optical microscope with camera and monitor, laptop, multimedia projector, boards, histological preparations</p>
<p><b>Preliminary conditions</b> (minimum requirements to be met by the student before starting the module/course)</p>
<p><b>Conditions to receive credit for the course:</b></p> <ol style="list-style-type: none"> <li>1. Oral or written credit from each class (allowed: no credit - 3 exercises)</li> <li>2. Test from the general histology: written, 10 open questions. To complete 60% correct answers is required.</li> <li>3. Embriology – multiple choice test, 30 questions, 16 correct answers is required to pass</li> </ol>

<b>Grade:</b>	<b>Criteria</b> (only for courses/modules ending with an examination)
Very Good (5.0)	-
Good Plus (4.5)	-
Good (4.0)	-
Satisfactory Plus (3.5)	-
Satisfactory (3.0)	-
	<b>Criteria</b> (only for courses/modules ending with e credit)
Credit	<ul style="list-style-type: none"> <li>• Test from the general histology: written, 10 open questions. To complete 60% correct answers is required.</li> <li>• Embriology – multiple choice test, 30 questions, 16 correct answers is required to pass</li> </ul>



<b>Grade:</b>	<b>Criteria</b> (examination evaluation criteria)
Very Good (5.0)	
Good Plus (4.5)	
Good (4.0)	
Satisfactory Plus (3.5)	
Satisfactory (3.0)	
Unit realizing the subject	Division of Histology and Embryology Wrocław Medical University
Unit address	ul. Chalubinskiego 6a, 50-368 Wrocław
Telephone	tel.: (71) 784-13-54(55), fax: (71) 784-00-82
E-Mail	e-mail: justyna.kosek@umed.wroc.pl

Person responsible for module	Marzenna Podhorska-Okolow MD, PhD, Prof.
Coordinator	Marzenna Podhorska-Okolow MD, PhD, Prof.
Telephone	tel. 71 784 16 70
E-Mail	e-mail: marzenna.podhorska-okolow@umed.wroc.pl

<b>List of persons conducting specific classes</b>				
<b>Full name</b>	<b>Degree/scientific or professional title</b>	<b>Discipline</b>	<b>Performed profession</b>	<b>Form of classes</b>
Urszula Ciesielska	PhD	Medical science	adiunct	lectures, classes
Christopher Kobierzycki	MD, PhD	Medical science	adiunct	lectures, classes
Sylwia Borska	PhD	Medical science	adiunct	seminars



**Date of Syllabus development**

23. 09. 2020

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**Syllabus developed by**

.....Urszula Ciesielska.....

**Signature of Head of teaching unit**

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**Signature of Faculty Dean**

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